

# Nikhil Singh

SRE / DevOps Engineer

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## PROFESSIONAL OVERVIEW

Cloud & DevOps Engineer with 3+ years of experience designing cost-optimized, multi-tenant AWS architectures. Specializes in driving engineering efficiency through serverless automation, secure identity management, and zero-credential deployment pipelines. Adept at building custom observability systems that guarantee high availability and accelerate software delivery.

## WORK EXPERIENCE

**Enetro** - DevOps Engineer

Jan 26` - Present

1. Architected a reusable, module-driven AWS platform via Terraform (ECS Fargate, ALB, API Gateway, Route53), utilizing isolated environment states to eliminate infrastructure drift.
2. Engineered zero-credential CI/CD pipelines using Bitbucket OIDC federation, automating secure ECR-to-ECS rolling deployments and centralized AWS Secrets Manager injection for highly deterministic releases.
3. Architected 40+ event-driven microservices via Serverless Framework (AWS Lambda), driving critical enterprise workflows including AI orchestration, automated billing, real-time OCR, and customer messaging.
4. Built an in-house mobile observability platform on AWS serverless primitives, eliminating dependency on Datadog/New Relic while processing 10M+ telemetry events/month across logs, traces, and metrics for under \$80/month.
5. Built a multi-tenant authentication system on AWS Cognito with Terraform-managed user pools, JWT claim enrichment via Lambda triggers, and a custom API Gateway authorizer that validates tokens and enforces tenant isolation by cross-checking JWT identity against per-request headers.

**Readywire** - Site Reliability Engineer

Jun 23` - Jan 26`

1. Engineered an event-driven RDS optimization pipeline using AWS Lambda to dynamically toggle slow query logging during CPU spikes, enabling root-cause analysis that improved database performance by 80%.
2. Accelerated application delivery by 75% (from 3 hours to 45 minutes) by architecting an automated Jenkins CI/CD pipeline for Acumatica utilizing PowerShell, Batch scripting, and REST APIs.
3. Reduced manual database operations by 65% by automating secure MySQL backup pipelines via Bash, integrating encrypted credential handling, on-the-fly 7z compression, and automated S3 routing with pre-signed URLs.

**Tata Consultancy Services** - Associate Engineer

Aug 21` - Jun23`

1. Automated manual user onboarding workflows by developing introductory Python scripts to handle account provisioning, eliminating dependency on static Excel trackers and significantly reducing employee setup time.
2. Streamlined incident reporting and tracking by combining Python automation with advanced Excel functions to parse support data and generate daily status reports, accelerating cross-team issue resolution.

## Skills

- **Cloud:** AWS (VPC, EC2, ECS Fargate, Lambda, API Gateway, RDS, ElastiCache, S3, Route53, Cognito, SQS, SNS, ECR, IAM)
- **IaC:** Terraform, AWS CDK, Serverless Framework
- **CI/CD:** Bitbucket Pipelines, Jenkins, OIDC Federation
- **Observability:** OpenTelemetry, OpenObserve, CloudWatch
- **Security:** WAFv2, Cognito (JWT/JWKS/OAuth 2.0), ACM/TLS, IAM
- **Scripting:** Python, Bash, PowerShell
- **Databases:** MySQL, PostgreSQL, DynamoDB

## EDUCATION

**B.Sc Computer** Invertis University , Bareilly

2018-2021